## The Claims:

1.      (Original)  A software interface for use in designing communications circuits, the software interface operable to:

receive input from a user;

in response to the user input, initiate:

accessing of a route plan comprising a first route point group associated with a first circuit end point, a second route point group associated with a second circuit end point, and one or more routes connecting the first and second route point groups, each route being available for use in designing the circuit;

selection of a route according to the route plan; and

automatic assignment of the selected route to the circuit in designing the circuit; and

provide information to the user reflecting the assignment of the route to the circuit.

2.      (Original)  The interface of Claim 1, wherein each route point group comprises one or more network locations available for use in designing the circuit, the selection of the route being initiated without regard to the network locations in the route point groups.

3.      (Original)  The interface of Claim 1, wherein the selection of the route is initiated without regard to facilities that underlie the route and which may be available for assignment to the target circuit.

4.      (Original)  The interface of Claim 1, wherein the route plan further comprises one or more priorities, each associated with a particular route, the selection of the route being initiated according to its priority.

5.      (Original)  The interface of Claim 1, wherein the route plan further comprises one or more allocation percentages, each associated with a particular route, the selection of the route being initiated according to its allocation percentage.

6.      (Original)  The interface of Claim 1, wherein the route plan further comprises a third route point group associated with an intermediate point and defining a segment between the intermediate point and an end point.

7.      (Original)  The interface of Claim 1, further operable to initiate an automatic determination of a network access point to connect with an end point lying outside of a network containing the routes, the routes connecting with the network access point.

8.      (Original)  The interface of Claim 1, further operable to initiate accessing of a network access template to determine how one or more elements outside of a network of the circuit are to access the network.

9.      (Original)  The interface of Claim 1, further operable to take customer-specified assignments into consideration in initiating the design of the circuit.

10.     (Original)  The interface of Claim 1, further operable to initiate an automatic determination of one or more intermediate locations for the circuit if the end points are not in an inventory of a provider.

11.     (Original)  The interface of Claim 1, further operable to initiate an automatic determination of a path for the circuit between two network locations within a particular route point group.

12.     (Original)  The interface of Claim 1, wherein the route plan is selected from among a plurality of route plans according to a service application.

13.     (Original)  The interface of Claim 12, further operable to initiate an automatic derivation of the service application from an associated circuit order.

14.    (Original)  The interface of Claim 13, wherein the initiated derivation of the service application is according to a link associating the service application with information in the circuit order, the information selected from the group consisting of:

a cataloged service item;

a service type;

a service type group;

a network channel code; and

a network channel interface code.

15.    (Original)  The interface of Claim 14, further operable to initiate selection of a particular service application from among multiple service applications linked to the circuit order according to a link preference.

16.    (Original)  The interface of Claim 1, further operable to initiate selection of the route plan from among a plurality of route plans according to a rate associated with the route plan.

17.    (Original)  The interface of Claim 1, further operable to initiate:

accessing of an equipment assignment template (EAT) specifying one or more characteristics of equipment; and

assignment of equipment to the circuit at one or more points in the selected route according to the EAT.

18.    (Original)  The interface of Claim 17, wherein the EAT specifies a particular equipment type for the circuit.

19.    (Original)  The interface of Claim 17, wherein the EAT specifies a particular equipment specification for the circuit.

20.     (Original)  The interface of Claim 17, wherein:

each route point group comprises one or more network locations available for use in designing the circuit; and

the interface is further operable to initiate assignment of equipment to the circuit at one or more network locations according to the EAT.


21.     (Original)  The interface of Claim 17, further operable to initiate:

accessing of a distance threshold associated with the EAT; and

applying the EAT only if at least a portion of the selected route exceeds the distance threshold.


22.     (Original)  The interface of Claim 17, wherein the EAT is selected from among a plurality of EATs according to a service application derived from a circuit order.


23.     (Original)  The interface of Claim 1, further operable to initiate:

assignment of facilities to the circuit;

assignment of equipment to the circuit; and

generation of a design layout for the circuit to complete the automatic design of the circuit.


24.     (Original)  The interface of Claim 1, further operable to provide information to the user reflecting selection of the route.


25.     (Original)  The interface of Claim 24, further operable to receive additional user input in response to selection of the route, the interface initiating assignment of the circuit to the route in response to the additional user input.

26. (Original) A software interface for use in automatically designing communications circuits, the software interface operable to:

receive input from a user comprising first and second circuit end points for a circuit to be designed;

in response to the user input, initiate:

accessing of a route plan comprising a first route point group associated with the first circuit end point, a second route point group associated with the second circuit end point, and one or more routes connecting the first and second route point groups, each route being available for use in designing the circuit;

selection of a route according to the route plan; and

automatic assignment of the selected route to the circuit in designing the circuit; and

provide information to the user reflecting the assignment of the selected route to the circuit.

27. (Original) The interface of Claim 26, further operable to allow the user to specify a priority for each route within the route plan, the selection of the route being initiated according to its priority.

28. (Original) The interface of Claim 26, further operable to allow the user to specify an allocation percentage for each route within the route plan, the selection of the route being initiated according to its allocation percentage.

29. (Original) The interface of Claim 26, further operable to:

initiate an automatic determination of a network access point to connect with an end point lying outside of a network containing the routes, the routes connecting with the network access point; and

provide the network access point to the user in response to its determination.

30. (Original) The interface of Claim 26, wherein the user input further comprises a customer-specified assignment to be considered in designing the circuit.

31.    (Original)  The interface of Claim 26, wherein the route plan is selected from among a plurality of route plans according to a service application, the service application being automatically derived from an associated circuit order, the interface further operable to provide the service application to the user.

32.    (Original)  The interface of Claim 31, further operable to allow the user to select a different service application to initiate accessing of a different route plan.

33.    (Original)  The interface of Claim 26, further operable to:

initiate accessing of an equipment assignment template (EAT) specifying one or more characteristics of equipment;

initiate assignment of equipment to the circuit at one or more points in the selected route according to the EAT; and

provide the EAT to the user in response to its assignment to the circuit.

34.    (Original)  The interface of Claim 33, wherein the EAT is selected from among a plurality of EATs according to a service application derived from a circuit order.

35.    (Original)  The interface of Claim 33, further operable to allow the user to select a different EAT to initiate assignment of different equipment to the circuit.

36.    (Original)  The interface of Claim 26, further operable to initiate generation of a design layout for the circuit, reflecting the assignment of the route, to complete the design of the circuit.